

PREVENTION OF TYPHOID FEVER

Drs. Levy and Freeman Present
Valuable Paper to Public
Health Association.

CONCLUSIONS DRAWN FROM SOUTHERN VIEWPOINT AS TO CAUSES OF DISEASE.

At the session of the American Public Health Association held in Winnipeg, Manitoba, during the past week, a paper on typhoid fever was presented jointly by Dr. E. C. Levy, chief health officer of Richmond, and Dr. Allan Freeman, medical inspector of the State Board of Health, which attracted much attention, and which

By a series of comparative figures the Richmond doctors advanced the theory that certain climatic conditions, not yet fully understood, had their influence in the spread of typhoid as much as the more generally understood and partially controlled causes along the lines which sanitarians have been working in recent years.

itarians believed they understood all about the epidemiology of typhoid fever. Since that time they have learned enough to know that there is much more that is not understood. Practically all of the early studies of typhoid fever were conducted in slums in Northern communities, and even up to the present time, but little careful work has been done along this line in the South. The opinions of the sanitary world were thus formed from experience with a human material which was little understood and made none-

Richmond's Record.

"Quite recently there has appeared a tendency to admit among leading sanitarians the justice of this claim, but the outbreak of typhoid fever in 1884 is an outgrowth of a prior evidence rather than of accurate study. The splendid investigations of camp typhoid during the Spanish-American war, the exhaustive studies of typhoid fever in the District of Columbia, and the excellent work of H. H. Henshaw, M. D., in Knoxville, must be noted as exceptions. The present paper has been written in the hope that the study of the epidemic of 1884 may be more fully conducted on a somewhat different basis: from those mentioned, may throw additional light on many points, and may be of service to the sanitarians for the past years, the period from 1880 to 1907 was considered. As the results of this investigation are being found to have excluded non-residents some of these years and included them in others, the original figures have been determined, some 50,000 in number. From these the death rate from typhoid and typhoid fever for each year has been fully compiled, the number of deaths ranging from 38 in 1886, to 133 in 1884, and from 44.2 per 100,000 of population in 1885, to 100,000 in 1884.

Mortality Decreasing.
"By combining the figures in this table it is shown that there has been a large, though irregular, falling off in the typhoid mortality in Richmond. In the period 1880-1884 (five years), the rate per 100,000 of population was 113.4; for 1885-1894 (ten years), 75.8; from 1895-1904 (ten years), 65.1 from 1905 through 1907 (three years), 45.3, showing a mortality in a considerable period of less than half of that in the early eighties.

From the figures compiled it is shown that in three years there were decided typhoid epidemics in Richmond—in 1881, 1884 and 1900. The death rate in each year was above 100 per 100,000 of population, while in 1884 it reached the very high figure of 183 per 100,000. The writers of the paper were unable to get in each case reliable information as to the cause of these epidemics, but they conclude that the

one of 1831 was due to the fact that there was in that year no consideration of the water supply. Richmond necessitating the abandonment of the waterworks pumps and the pumping of water from a canal on which a packet line was maintained. The water supply was less than one-half of the inadequate water supply from the old basin. Both of these sources were, of course, highly polluted. In 1834 the deaths suddenly increased to 1,500 in the month of May, 32 in the month of May, although May is usually a month of low mortality. An infected water supply is suggested, but is largely conjecture. That the epidemic was probable due to infected milk supply.

The second part of the paper deals with the more careful investigation which has been made and has been made of all cases occurring since its reorganization in 1967. Every reported case has been investigated, and all possible information secured by the medical inspectors. Of the data so obtained, the writers have reached the conclusion that the public water supply has been a comparatively small factor in the causation of phosphorus poisoning. However, there have been a small outbreak due to this cause in

They also believe they have traced certain outbreaks in the past to infected milk supply, but both of the writers are confident nothing of the sort has occurred in the past fifteen months, since the dairies have been under rigid inspection. They believe the main source of typhoid fever in Richmond is the large number of houses with dry closets, into which the excreta of typhoid patients are

deposited without effectual disinfection, and from which the germs are carried to new victims by flies or other means.

Means of Prevention.

After reviewing the situation in many aspects, the paper closes with the following recommendations, designed to meet the situation both here and in Southern cities, where conditions are similar:

"Prompt reporting of all cases of

Immediate inspection of every reported case, including information and the studying the data obtained, with a view to determining the origin of the case.

"Instructing the members of the household at the time of the visit in the means of prevention, and leaving printed directions.

"Closing of all wells in the city when a good public water supply is available, and an extension of this supply to all the people.

every dairyman to report immediately any case of illness among the members of his household, employees and their families. Prompt shutting off of the milk supply wherever a case that cannot be perfectly isolated is found.

"Rigid supervision over the disinfection of excreta in all typhoid cases and the supplying of disinfectants gratis by the Health Department in indigent cases.

"The campaign against flies, the elimination of breeding places, and

"Supervision over 'carrier' cases, though just how this can be done legally and efficiently at present is an unsettled problem."